

## WHAT IS CLAIMED IS:

1                   1.     A process of imparting corrosion resistance to a substrate for  
2     use in a marine environment by coating said substrate with a polyurethaneurea, said  
3     process comprising:

4                   mixing

5                   a)     an A-side of a polyurethaneurea coating comprising an  
6     isocyanate-terminated prepolymer prepared by reacting an excess of a diisocyanate  
7     with at least one hydrophobic polyoxyalkylene diol having a molecular weight of  
8     from 400 Da to 4000 Da;

9                   with

10                  b)     a B-side containing a diamine and a hydrophobic  
11     polyoxyalkylene diol having a molecular weight determined by its hydroxyl number  
12     of from 200 Da to 4000 Da, in a weight ratio of diamine to hydrophobic  
13     polyoxyalkylene diol of from 1:10 to 10:1;

14                  to form a curable polyurethaneurea mixture having an NCO/OH ratio  
15     of from 0.85 to 1.15;

16                  c)     spraying said curable mixture onto said substrate, and curing  
17     said mixture to form a polyurethaneurea coating on said substrate.

1                   2.     The process of claim 1, wherein at least one hydrophobic  
2     polyoxyalkylene diol is selected from the group consisting of polytetramethylene  
3     ether glycols and low unsaturation polyoxypropylene diols.

1                   3.     The process of claim 1, wherein the ratio of diamine to  
2     hydrophobic polyoxyalkylene diol in said B-side is from 3:1 to 1:3.

1                   4.     The process of claim 1, wherein said A-side polyoxyalkylene  
2     diol comprises at least one polytetramethylene ether glycol having a molecular  
3     weight between 500 Da and 1000 Da and a further polyoxyalkylene diol such that  
4     a diol component having a bimodal molecular weight distribution is reacted with  
5     said diisocyanate.

- 1                    5.     The process of claim 1, wherein said diisocyanate is toluene  
2     diisocyanate.
- 1                    6.     The process of claim 1, wherein said diamine comprises  
2     diethyltoluene diamine.
- 1                    7.     The process of claim 1, wherein said A-side and said B-side  
2     have viscosities of 500 cp or less at 160° F.
- 1                    8.     The process of claim 1, wherein said substrate comprises  
2     brass, bronze, bright metal, zinc, magnesium, aluminum, non-stainless steel, or  
3     stainless steel.
- 1                    9.     The process of claim 1, wherein said substrate comprises non-  
2     stainless steel, magnesium, or aluminum.
- 1                    10.    The process of claim 1, wherein said substrate comprises a  
2     fiber-reinforced polymer.
- 1                    11.    The process of claim 1, wherein said substrate comprises both  
2     a metal and a fiber-reinforced polymer.
- 1                    12.    The process of claim 1, wherein said substrate is first coated  
2     with a primer coating prior to coating with said polyurethaneurea.
- 1                    13.    A marine component for mounting on a water vessel,  
2     comprising a substrate coated by the process of claim 1.
- 1                    14.    The component of claim 13, wherein said component  
2     comprises aluminum, non-stainless steel, or a mixture thereof.
- 1                    15.    A marine component for mounting on a water vessel,  
2     comprising a substrate coated by the process of claim 2.

1                   16.    A marine component for mounting on a water vessel,  
2    comprising a substrate coated by the process of claim 3.

1                   17.    A marine component for mounting on a water vessel,  
2    comprising a substrate coated by the process of claim 4.

1                   18.    The component of claim 13 which is a radar arch, fishing  
2    platform, bow rail, or rub rail.

1                   19.    The component of claim 13 comprising a substrate comprising  
2    a metal frame and a thin plastic or fiber-reinforced polymer sheet overlying said  
3    frame, and a coating of from 100 to 500 mil of polyurethaneurea applied over said  
4    substrate.

1                   20.    The component of claim 19, wherein said polyurethaneurea  
2    coating is effective to increase the rigidity of the substrate.